

16	0	6633186.pn. and (((345/107 or 349/89 or 359/296 or 204/450 or 204/600 or 427/213.3 or 427/212 or 264/1.36 or 264/1.7 or 264/4.1 or 264/437-438).ccls.) and particl\$3 WITH "no" NEAR2 (power or voltage or electric\$3 NEAR2 field\$1)) or (((345/107 or 349/89 or 359/296 or 204/450 or 204/600 or 427/213.3 or 427/212 or 264/1.36 or 264/1.7 or 264/4.1 or 264/437-438).ccls.) and particl\$3 WITH "off" NEAR2 (power or voltage or electric\$3 NEAR2 field\$1)) or (((345/107 or 349/89 or 359/296 or 204/450 or 204/600 or 427/213.3 or 427/212 or 264/1.36 or 264/1.7 or 264/4.1 or 264/437-438).ccls.) and particl\$3 WITH "zero" NEAR2 (power or voltage or electric\$3 NEAR2 field\$1)))	USPAT	2004/03/20 20:05
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Ex. 1	0.3	52	24.9	Particles are moved.	White density	Black density	Filling amount (mg/cm ³)	Filling rate (vol. %)	Gap between substrates (mm)
Ex. 2	0.3	42	20.1	not moved.	not moved.	not moved.	Part of	Part of	Particles are moved.
Ex. 3	0.3	22	10.5	1.5-1.6	0.35-0.4	0.35-0.4	Part of	Part of	Particles are moved.
Ex. 4	0.3	16	7.7	1.5-1.6	0.35-0.4	0.35-0.4	Part of	Part of	Particles are moved.
Ex. 5	0.3	14	6.7	1.5-1.6	0.35-0.4	0.35-0.4	Part of	Part of	Particles are moved.
Ex. 6	0.3	8	3.8	1.5-1.6	0.35-0.4	0.35-0.4	Part of	Part of	Particles are moved.
Ex. 7	0.3	6	2.9	1.2-1.3	0.4-0.5	0.4-0.5	Part of	Part of	Particles are moved.
Ex. 8	0.1	42	6.7	1.2-1.3	0.4-0.5	0.4-0.5	Part of	Part of	Particles are moved.
Ex. 9	0.1	24	3.8	1.4-1.5	0.45-0.55	0.45-0.55	Part of	Part of	Particles are moved.

TABLE I

With respect to the image display medium 10 of the first embodiment, the dependence of the moving properties of the particles 20 and the black particles 18 between the stratae on the filling amount and the filling rate was studied, and the results shown in Table 1 were obtained.

EXAMPLE 1

For example, magnetic spherical particles are prepared as follows. The hundred parts by weight of a polyester resin,⁴ 4 avajabale, 2% aqueous solution is weighed out in a carboxymethylcellulose 2% aqueous solution is dispersed with a ball mill for 48 hours to form solution A. Meanwhile, 100 parts by weight of C, 1. Pigment Red 57 and 110 parts by weight of polyester resin,⁴ 4 avajabale, 2% aqueous solution B. Subsequently, 100 parts by weight of solution A and 50 parts by weight of solution B is stirred with an emulsifier, and 50 parts by weight of the residue is washed with water, dried, and classified to subparties. In this manner, the particle groups excellent in charging properties, fluidity and environmental stability are obtained.

crosslinked copolymer containing divinylbenzene as a main crosslinker. Plating to surfaces of the particles formed of a suspulsion polymer

Examples of the black particles 18 include the spherical MBX-Black made by Sekisui Chemical Co., Ltd. (of crosslinked polymeric methacrylate, spherical particles (Micropearl BB and Micropearl BBP made by Sekisui Chemical Co., Ltd.) formed of a crosslinked BBP made by Sekisui Chemicals (Micropearl BB and Micropearl BBP made by Sekisui Chemical Co., Ltd.) formed of a main component, monophous carbonating divinylbenzene as a main component, and carbonating divinylbenzene as a main component, crosslinked copolymer resin 35 particles (Uniteks GCP made by Unitekka Ltd.) and carbonation particles (Uniteks GCP prepared by Unitekka Ltd.) and carbonation particles such as red, blue, green, magenta, cyan, yellow, 40 black MC and Nitro-Bead PC made by Nippon Carbonation and graphite spherical fine particles (Nitro-Bead ICB, Nitro-Bead MC and Nitro-Bead PC made by Nippon Carbonation KK). Further, besides the black and white particles, color particles such as red, blue, green, magenta, cyan, yellow, 45 gold and silver particles are also available. Examples thereof include spherical fine particles (MBX-Red made by Sekisui Chemical Co., Ltd.) of crosslinked polymethyl methacrylate, and spherical conductive particles (Micropearl AU made by Sekisui Chemical Co., Ltd.) obtained by applying electric field plating and then goal 45

on, alkyl-modified silicone oil, α -methylstyrene-modified silicone oil, chloropenta silicocene oil, fluoroine-modified silane-modified silane, white particles 20 include the sphencial fine titanium made by Sekisui Chemical Co., Ltd. of crosslinked polymethyl methacrylate containing a titanium oxide pigment fine powder, a product obtained by suspending a white fine particles with an impulse force to fix the same surfaces of the fine particles, and particles obtained by adhering or embedding a white fine powder to or in the surfaces of molten particles made of various materials such as a styrene resin, a phenolic resin, a silicone resin and a 15 silicone. The charging properties of particles are uniform particle diameter. The charging properties of particles are uniform particle size and zinc oxide. Examples of the white particles include the white pigment titanium aluminum oxide, manganese aluminum oxide and zinc oxide. Examples of the white particles include porous sponge particles and hollow particles including air hereim. Further, a toner used in a copier or a printer, 20 as a polymerization method or a suspension method are also especially spherical particles formed by a wet method such as a polymerization method or a suspension method are also 25